

TITLE 19 ZONING

CHAPTER 19.300 USE ZONES

19.322 WATER QUALITY AND NATURAL RESOURCE REGULATIONS.

19.322.1 Purpose, General Policies, and Declarations

- A. Many of the city's original wetland, wildlife habitat and riparian resources have been adversely affected by historical development. These regulations seek to minimize additional adverse impacts and restore and improve resources where possible while balancing property rights and development needs of the city.
- B. It is the intent of this chapter:
1. To ensure protection of the functions and values of water quality resource areas at the time of development.
 2. To protect and improve the functions and values that contribute to fish and wildlife habitat in urban streamside areas. These functions and values include, but are not limited to:
 1. Vegetated corridors to separate protected water features from development;
 2. Microclimate and shade;
 3. Natural stream corridors;
 4. Stream flow moderation and water storage;
 5. Provide filtration, infiltration and natural water purification;
 6. Bank stabilization, sediment and pollution control;
 7. Large wood recruitment and retention and channel dynamics; and,
 8. Organic material resources.
 3. Further, the intent and purpose of this section is to protect and improve the following functions and values that contribute to upland wildlife habitat:
 1. Large habitat patches;
 2. Interior habitat;
 3. Connectivity and proximity to water;
 4. Connectivity and proximity to other upland habitat areas.
 4. To establish high, moderate, and low habitat conservation areas (HCA) to implement the performance standards of Title 13 of the Urban Growth Management Functional Plan (UGMFP) and to protect significant local Goal 5 resources.
 5. To provide clear and objective standards and a discretionary review process, applicable to development in Habitat Conservation Areas, in accordance with Statewide Land Use Planning Goal 5.
 6. To allow and encourage habitat-friendly development, while minimizing the impact on fish and wildlife habitat functions.

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7. To provide mitigation standards for the replacement of ecological functions and values lost through development in wetlands, water quality resources and HCAs.

C. It is not the intent of this chapter to:

1. Impose any obligation on property owners for the restoration of existing developed sites to pre-development or natural condition.
2. Impose any hardship or limitation against the continued maintenance of existing legal site conditions.
3. Restrict activities that do not constitute development or to apply to activities that do not affect water quality or natural resource areas. Normal lawn and yard planting and maintenance does not include planting of invasive non-native or noxious vegetation.
4. Prohibit normal lawn and yard landscape planting and maintenance.

This chapter is to be interpreted consistently with this intent.

- D. Relief from the strict application of this section is afforded through 19.322.142 variance provisions.
- E. This chapter provides protection for natural resources-that have been identified for the purposes of implementing Statewide Planning Goal 5 relating to significant natural riparian, wildlife, and wetland resources and Title 13 of Metro's Urban Growth Management Functional Plan and water quality resources under statewide planning Goal 6 and Sections 1-4 of Title 3 of Metro's Urban Growth Management Functional Plan.
- F. This chapter establishes the water quality resource area regulations. The *Milwaukie Water Quality and Natural Resource Area Map (hereafter WQNR Map)* is incorporated by reference as part of this chapter.
- G. The water quality and natural resource area regulations allow development in situations where adverse impacts from the development can be avoided or mitigated and where the strict application of these rules would deny reasonable economic use of property.
- H. Implementation of this chapter is in addition to and shall be coordinated with Milwaukie Municipal Code Title 19 Zoning Ordinance, Title 18 Flood Hazard Regulations and Chapter 16.28 Erosion Control.
- I. Conditions legally existing as of December 17, 2002, that are inconsistent with this chapter are declared legal non-conforming situations.
- J. Evidence of physical conditions for sites existing at the time this chapter was adopted shall consist of city, county and Metro records, aerial photography and other information that may be available.
- K. A document or other list used to identify native, noxious, and invasive plants shall be maintained by the Planning Director.

19.322.2 Coordination with the Willamette Greenway Overlay

- A. For properties along the Willamette River, nothing in this chapter shall prohibit the maintenance of view windows authorized under the Milwaukie Zoning Ordinance 19.320 Willamette Greenway Zone.
- B. Except as provided for in Section 19.322.2(A), provisions of this chapter shall apply where they are more restrictive than Chapter 19.320 Willamette Greenway Zone.

19.322.3 Applicability

- A. Water quality and natural resource area regulations **apply to all properties** containing water quality resource areas, habitat conservation areas (including locally significant natural resources) as shown on the adopted WQNR Map. Application for development activity shall be made in accordance with Title 19, this chapter, and subsections 19.322.9, Application Requirements, and 19.322.11, Development Standards.
- B. Natural resources subject to the standards of this Chapter are designated on the WQNR Map as follows:
 - 1. Water Quality Resource Areas include the protected water feature and the vegetated corridor. The vegetated corridor (buffer) is a facility required to prevent damage to the protected water feature caused by development impacts. The width of the vegetated corridor varies depending on the type of protected water feature; upstream drainage area served; and, slope adjacent to the protected water feature, as specified in Table 19.322.13.A.
 - 2. Habitat Conservation Area (HCA) are designated as follows:
 - a. High - These areas include Habitat Conservation Areas designated as “High” on the UGMFP Title 13 Habitat Conservation Area maps and all locally significant wetlands, riparian corridors, and wildlife habitat.
 - b. Moderate - These areas include Habitat Conservation Areas designated as “Moderate” on the UGMFP Title 13 Habitat Conservation Area maps.
 - c. Low - These areas include Habitat Conservation Areas designated as “Low” on the UGMFP Title 13 Habitat Conservation Area maps.
- C. The requirements of this Chapter apply in addition to all applicable local, state, regional and federal regulations, including those for wetlands and flood management areas.

19.322.4 Activities Permitted Outright

- A. For that portion of a property which is not within a water quality resource area or HCA, activities allowed in the base zone do not require approval under the provisions of this chapter except that where an applicant proposes development subject to Type I, Type II or Minor Quasi-Judicial Review within **200** feet of water quality resources or HCA, the applicant must submit a construction management plan in accordance with the requirements of 19.322.9(A) and verify the natural resource boundaries in accordance with the requirements of 19.322.9(B). The boundary verification and construction management plan shall be subject to Type I review. In order to avoid to avoid developing within a water quality resource area or HCA, an applicant may utilize the Adjustments to Use Zone Standards in 19.322.11(A).
- B. The following activities are permitted outright ~~in~~ within either the water quality resource area or HCA and therefore do not require approval under the provisions of this chapter:
 - 1. A building permit for a phased development project for which the applicant has previously met the application requirements of this chapter, so long as the building site for new construction was identified on the original permit and no new portion of the water quality resources and/or HCA will be disturbed.
 - 2. Where a property has been subdivided, and the mitigation requirements of this Chapter have been completed for the subdivision, development on the individual lots may proceed without further review under this chapter.

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3. Stream, wetland, riparian and upland enhancement or restoration projects and development in compliance with a natural resource management plan or mitigation plan approved by the City or by a state or federal agency.
 4. Farming practices or farm uses, excluding buildings and structures except if such activities or uses increase direct discharges to water resources.
 5. Change of use where there are no exterior alterations to buildings or structures, or increases in floor area, impervious surfaces or storage areas except if it would result in direct stormwater discharges to the water quality resource area.
 6. The normal maintenance and repair of existing structures, utilities, access, streets, driveways and parking improvements including asphalt overlays except if it would result in direct stormwater discharges to the water quality resource area.
 7. Emergency procedures or activities undertaken which are necessary to remove or abate hazards or for the protection of public health, safety and welfare; provided that such remedial or preventative action must take place within a timeframe too short to allow for compliance with the requirements of this chapter. After the emergency, the person or agency undertaking the action shall fully restore any impacts to the natural resources resulting from the emergency action.
 8. Landscape planting and maintenance that does not involve invasive or noxious vegetation except if it would result in direct stormwater discharges to the water quality resource area.
 9. Maintenance of public and private storm drainage facilities in accordance with a management plan approved by the City.
 10. Other activities similar to the above that are determined by the planning director to be consistent with the purpose and policies of this chapter and which have also been found to have no appreciable impact to the water quality resource area or HCA.
 11. Removal of plants identified by the City as invasive or noxious plants and the planting or propagation of plants identified as native plants. After removal of invasive or noxious plants, all open soil areas greater than 25 square feet must be replanted.
- C. In addition to the activities listed above, the following activities are within HCAs and do not require approval under the provisions of this chapter:
1. The alteration, expansion, or replacement of existing structures, provided that:
 - a. The alteration, expansion, or replacement of a structure will not intrude more than 500 square feet into the HCA in addition to the area defined as the building footprint as of January 1, 2006 and,
 - b. The new intrusion into the HCA is no closer to the protected water feature than the pre-existing structure or improvement.
 2. Minor encroachments not to exceed 120 sq. ft. of impervious surface such as accessory buildings, eave overhangs, exterior building improvements for access and exiting requirements, or other similar features.
 3. Temporary and minor clearing not to exceed 200 square feet for the purpose of site investigations and pits for preparing soil profiles, provided that such areas are restored to their original condition when the investigation is complete.
 4. Low-impact outdoor recreation facilities for public use, including, but not limited to, multi-use paths, access ways, trails, picnic areas, or interpretive and educational

displays and overlooks that include benches and outdoor furniture, provided that the facility meets the following requirements:

- a. It contains less than 500 sq. ft. of new impervious surface; and,
 - b. Its trails shall be constructed using non-hazardous, pervious materials, with a maximum width of four feet.
5. Facilities that infiltrate stormwater onsite, including the associated piping, may be placed within the HCA so long as the forest canopy and the areas within the driplines of the trees are not disturbed. Such facilities may include, but are not limited to, vegetated swales, rain gardens, vegetated filter strip, and vegetated infiltration basins. Only native vegetation may be planted in these facilities.

19.322.5 Activities Permitted Under Type I Application Review

- A. Except for activities permitted outright under 19.322.4, where an applicant proposes development within **200** feet of water quality resources or HCA, the applicant must submit a construction management plan in accordance with the requirements of 19.322.9(A) and verify the natural resource boundaries in accordance with the requirements of 19.322.9(B). The boundary verification and construction management plan shall be subject to Type I review.
- B. Unless otherwise permitted outright under 19.322.4(C), the following activities are allowed within either the water quality resource area or HCA under 19.1011.1 Type I application review subject to the conditions specified below:
 1. Measures to remove or abate nuisances, or any other violation of state statute, administrative agency rule or city or county ordinance subject to a mitigation plan to be approved by the planning director prior to the abatement activity.
 2. Tree removal as necessary to eliminate an imminent hazard to person or property when sufficient evidence of the hazard is provided to the satisfaction of the planning director.
 3. Improvements and modifications to legal structures or improvements that do not increase the building footprint or size and location of the existing area of disturbance within the water resource quality area or result in an increase in direct stormwater discharges to the water quality resource area. New decks, patios, building extensions or other development that extend into the water quality resource area are subject to 19.322.7.
 4. Other activities similar to the above that are determined by the planning director to be consistent with the purpose and policies of this chapter and which have also been found to have no appreciable impact to the water quality resource area.
- C. Within HCAs, any activity allowed in the base zone that is in compliance with the non-discretionary development standards of 19.322.11(C).

19.322.6 Activities Permitted Under Type II Review

Unless otherwise permitted outright under 19.322.4(C), the following activities are allowed within either water quality resource areas or HCAs subject to approval by the planning director under subsection 19.1011.2, Type II Review, and compliance with subsection 19.322.11(B) or 19.322.11(D), Development Standards.

- A. Improvement of existing public utility facilities where:

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1. The disturbed portion of the water quality resource area is restored; and
 2. Non-native vegetation within the disturbed area is removed from the water quality resource area and replaced with native vegetation.
- B. Special uses in compliance with 19.322.11(B), including:
1. New stormwater pre-treatment facilities.
 2. Walkways and bike paths.
 3. New public or private utility facility construction.
 4. Modification to any nonconforming situation subject to Type II review under Section 19.800 Nonconforming Situations.
- C. Farming practices or farm uses, excluding buildings and structures that increase direct discharges to water resources.
- D. Change of use where there are no exterior alterations to buildings or structures, or increases in floor area, impervious surfaces or storage areas, but which would result in direct stormwater discharges to the water quality resource area.
- E. The normal maintenance and repair of existing structures, utilities, access, streets, driveways and parking improvements including asphalt overlays which would result in direct stormwater discharges to the water quality resource area.
- F. Landscape planting and maintenance that does not involve invasive non-native or noxious vegetation that would result in direct stormwater discharges to the water quality resource area.
- G. Improvements and modifications to legal structures that do not increase the building footprint or size and location of the existing area of disturbance within the water resource quality area, but which would result in an increase in direct stormwater discharges to the water quality resource area.
- H. Natural resource management plans and stormwater management plans.
- I.~~D~~. Other activities similar to the above that are determined by the planning director to be consistent with the purpose and policies of this chapter and which have also been found to have no appreciable impact to the water quality resource area.

19.322.7 Activities Permitted Under Minor Quasi-Judicial Review

Unless otherwise permitted under 19.322.4 through 19.322.6, the following activities are allowed within water quality resource areas or HCAs subject to approval by the planning commission under 19.1011.3 minor quasi-judicial review and compliance with subsection 19.322.101(D), Development Standards:

- A. Any activity allowed in the base zone.
- B. Roads to provide access to protected water features or necessary ingress and egress across water quality resource areas.
- C. New stormwater pre-treatment facilities not in compliance with 19.322.11(B).
- D. New public or private utility facility construction not in compliance with 19.322.11(B).
- E. Walkways and bike paths not in compliance with 19.322.11(B).
- F. Widening an existing road adjacent to, or running parallel to a water quality resource area.

- G. Additions, alterations, rehabilitation or replacement of existing structures, roadways, accessory uses and development that increase the structural footprint or disturbed area within the water quality resource area.
- H. Partitions and subdivisions that contain protected water features or water quality resource areas.
- I. The removal of trees and vegetation in excess of that permitted under 19.322.4 through 19.322.6.

19.322.8 Prohibited Uses

Following adoption of this chapter, the following activities are prohibited within water quality resource areas and HCAs:

- A. New structures, development or activity other than those allowed in subsections 19.322.4 through 19.322.7.
- B. Uncontained areas of hazardous materials within a water quality resource area. This prohibition shall not be effective until the planning director has adopted administrative measures for its implementation, which shall be no later than June 1, 2003.
- C. The planting of any invasive or noxious vegetation.
- D. Outside storage of materials, unless such storage began before the *effective date of this ordinance*; or, unless such storage is approved during *development review*.

19.322.9 Application Requirements

- A. Construction Management Plan. In order to ensure that trees and vegetation within water quality resource areas and HCAs are not damaged during construction, all applicants proposing development subject to Type I, Type II or Minor Quasi-Judicial Review within 200 feet of a water quality resource area or HCA shall provide a construction management plan which ensures that:
 - 1. Prior to construction, the water quality resource area and/or HCA shall be flagged, fenced or otherwise marked and shall remain undisturbed except as may be allowed by this chapter. Such markings shall be maintained until construction is complete.
 - 2. Site preparation and construction practices shall be followed that prevent drainage of hazardous materials or erosion, pollution or sedimentation to the adjacent water quality resource area.
 - 3. Storm water flows as a result of proposed development within and to natural drainage courses shall not exceed pre-development flows.
 - 4. The construction phase of the development will be done in such a manner to safeguard the resource portions of the site that have not been approved for development.
 - 5. Construction management plans shall include the following information:
 - a. Location of site access and egress that construction equipment will use;
 - b. Equipment and material staging and stockpile areas;
 - c. Erosion and sediment control measures; and
 - d. Measures to protect trees and other vegetation located within the water quality resource area and/or HCA, but outside of the approved disturbance.

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- B. Boundary Verification. All applicants proposing development subject to Type I, Type II or Minor Quasi-Judicial Review within 200 feet of a water quality resource area or HCA shall verify the boundary of the water quality resource area and/or HCA in accordance with the requirements of 19.322.13.
- C. Applications for Type I review made pursuant to 19.322.5(C) or Type II applications made pursuant to 19.322.6(B) shall provide the following additional information:
1. For the entire subject property (including non-resource areas), applicants must submit a scale map of the property that includes:
 - a. Location of any wetlands or water bodies on the property, including a delineation of the Water Quality Resource Area.
 - b. Location of all High, Moderate, and Low HCAs on the property;
 - c. Outline of any existing disturbance area, including the location of existing adjacent streets and paved areas, utilities, culverts, stormwater management facilities, or bridges;
 - d. Location of 100-year floodplain and floodway boundary as defined by the Federal Emergency Management Agency (FEMA) and the area of the 1996 flood inundation; and
 - e. Topography shown by two-foot vertical contours in areas of slopes less than 15 percent, and at five-foot vertical contours of slopes 15 percent or greater. On properties that are two acres or larger, such a contour map is required only for the portion of the property to be developed.
 - f. Detailed site plan of proposed development outlining total disturbance area, including, proposed building footprints, site property improvements, utilities and landscaping. The types, sizes and intensities of lights must be placed so that they do not shine directly into the water quality resource area or HCA.
 - g. If grading will occur within a Water Quality Resource or HCA, a grading plan showing the proposed alteration of the ground at two-foot vertical contours in areas of slopes less than 15 percent, and at five-foot vertical contours of slopes 15 percent or greater.
- D. Applications for Type II (other than for special uses identified in 19.322.6(B)) and minor quasi-judicial review within a water quality resource area or HCA shall provide the following information in addition to the information required subsection C, above:
1. The location of all existing natural features including, but not limited to, all trees of a caliper greater than six (6) inches diameter at breast height (DBH), natural drainages on the site, springs, seeps, and outcroppings of rocks or boulders within the water quality resource area or HCA.
 2. Where wetlands are identified, the applicant shall follow the division of state lands wetlands delineation process. The delineation shall be prepared by a professional wetlands specialist and will be accepted only after approval by the Oregon division of state lands;
 3. An inventory and location of existing debris and noxious materials within the water quality resource area or HCA.
 4. An inventory of vegetation, including percentage ground and canopy coverage materials within the water quality resource area or HCA.

- 5. A narrative report addressing the requirements of 19.322.11(D).
- E. All information contained in the application submission requirements and site plan checklist forms prescribed by the planning director.
- F. The application fee as adopted by the city council.

19.322.10 Approval Criteria

Applications for Type I, Type II and minor quasi-judicial review within a water quality resource area or HCA shall demonstrate compliance with the applicable approval criteria outlined below.

- A. Type I applications made pursuant to 19.322.5(C) shall demonstrate compliance with the non-discretionary standards in 19.322.11(C).
- B. Type II applications made pursuant to 19.322.6(B) shall demonstrate compliance with the special use standards in 19.322.11(B). All other Type II applications shall demonstrate compliance with the discretionary standards in 19.322.11(D)
- C. Minor quasi-judicial applications made pursuant to 19.322.7 shall demonstrate compliance with the discretionary standards in 19.322.11(D).

19.322.11 Development Standards

- A. Adjustments to Use Zone Standards. In order to avoid or minimize impacts to water quality resource areas or HCAs, the following adjustments to the standards of the underlying use zone shall be allowed for development on parcels that include a water quality resource area or HCA:
 - 1. The minimum building setback of the base zone may be reduced to any distance between the base zone minimum and zero, unless this reduction conflicts with applicable fire or life safety requirements.
 - 2. Landscaping requirements, apart from those required for parking lots, may be met by preserving the water quality resource areas and/or HCA.
 - 3. In order to accommodate the transferred density, dimensional standards and lot sizes may be adjusted by no more than 30 percent.
 - 4. All area within a water quality resource area or HCA, or any portion of it, may be subtracted from the calculations of net size for purposes of determining the minimum number of units that must be built on the property, provided that such area is protected, such as by making a public dedication or executing a restrictive covenant. This provision may only be applied to properties that were inside the Metro UGB on January 1, 2002.
- B. Standards for Special Uses. Type II applications for the uses listed in subsections 5 – 8 of this section shall satisfy the following standards:
 - 1. Water quality resource areas and HCAs shall be restored and maintained in accordance with an approved mitigation plan;
 - 2. To the extent practicable, existing vegetation shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage to water quality resource areas and HCAs. Trees in the water quality resource areas or HCAs shall not be used as anchors for stabilizing construction equipment;

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3. Where existing vegetation has been removed, or the original land contours disturbed, the site shall be revegetated, and the vegetation shall be established as soon as practicable. Nuisance plants, as identified by the City, may be removed at any time. Interim erosion control measures such as mulching shall be used to avoid erosion on bare areas. Nuisance plants shall be replaced with non-nuisance plants by the next growing season;
4. Stormwater pre-treatment facilities:
 - a. The stormwater pre-treatment facility may encroach a maximum of twenty-five (25) feet into the outside boundary of the water quality resource area of a primary water feature; and
 - b. The area of encroachment must be replaced by adding an equal area to the water quality resource area on the property.
5. Where proposed, development of trails, rest points, viewpoints and other facilities for the enjoyment of the resource must be done in such a manner so as to reduce impacts on the natural resource while allowing for the enjoyment of the resource.
 - a. Wherever practicable, a gravel walkway or bike path may not be constructed closer than ten (10) feet from the boundary of the protected water feature. Walkways and bike paths shall be constructed so as to minimize disturbance to existing vegetation. Where practicable, a maximum of ten (10) percent of the trail may be within thirty (30) feet of the protected water feature,
 - b. Wherever practicable, a paved walkway or bike path shall not be constructed closer than ten (10) feet from the boundary of the protected water feature. For any paved walkway or bike path, the width of water quality resource areas or HCAs must be increased by a distance equal to the width of the path. Walkways and bike paths shall be constructed so as to minimize disturbance to existing vegetation. Where practicable, a maximum of ten (10) percent of the trail may be within thirty (30) feet of the protected water feature, and
 - c. A walkway or bike path shall not exceed ten (10) feet in width.
6. Utility facility standards. The following disturbance area limitations apply to new utilities, private connections to existing or new utility lines, and upgrade
 - a. The disturbance area for utility facility connections to utility facilities is no greater than 10 feet wide.
 - b. The disturbance area for the upgrade of existing utility facilities is no greater than 15 feet wide.
 - c. The disturbance area for new underground utility facilities is no greater than 25 feet wide and disturbs no more than 200 linear feet of water quality resource area, within any 1,000 linear foot stretch of water quality resource area; provided that this disturbance area shall be restored with the exception of necessary access points to the utility facility.
 - d. No fill or excavation is allowed within the ordinary high water mark of a stream, unless a permit is obtained from the US Army Corps of Engineers through the Standard Local Operating Procedures for Endangered Species (SLOPES) process.
 - e. Mitigation is required as described in subsection 19.322.XXX.

7. Additions, alterations, rehabilitation and replacement of lawful structures or improvements.
 - a. For existing structures, roadways, driveways, accessory uses and development which are nonconforming, this chapter shall apply in addition to the nonconforming use regulations of the city.
 - b. Additions, alterations, rehabilitation or replacement of existing structures, roadways, driveways, accessory uses and development shall not encroach closer to the protected water feature than the existing structures, roadways, driveways, accessory uses and development.
- C. Non-Discretionary Development Standards for HCAs. The following development standards apply to all development that occurs within the HCA except for activities that are permitted outright pursuant to 19.322.4 and special uses addressed in subsection B. If all development occurs outside of an HCA on a property, these standards do not apply. These standards also do not apply to development that occurs pursuant to the standards established by the discretionary development standards in subsection D. (Note: Applicants seeking to develop within a Water Quality Resource Area must utilize the special use standards in subsection B or the discretionary standards in subsection D).
 1. Disturbance area limitations to minimize impact to HCA.
 - a. Detached single-family residential uses. The maximum disturbance area (MDA) allowed within HCAs is determined by subtracting the area of the lot or parcel outside of the HCAs from the total disturbance area (TDA) calculated as described in Table 19.322.11.C-1 below. ($TDA - \text{Area outside the HCA} = MDA$)
 - (1) Moderate and Low HCAs are subject to the same disturbance area limitations.
 - (2) Calculation of maximum disturbance area. If a lot or parcel includes both High and Moderate/Low HCAs then:
 - (a) If there is more High HCA than Moderate/Low HCA on the lot or parcel, then the MDA shall be calculated as if all of the Moderate/Low and High HCA were High, per Table 19.322.11.C-1, below; or
 - (b) If there is more Moderate/Low HCA than High HCA on the lot or parcel, then the MDA shall be calculated as if all of the Moderate/Low and High HCA were Moderate/Low, per Table 19.322.11.C-1, below.
 - (3) Location of MDA. If a lot or parcel includes different types of HCAs, then:
 - (a) The amount of development that may occur within the High HCA is equal to the total disturbance area minus the area of the lot or parcel outside of the High HCA ($TDA - \text{non-High HCA} = MDA$). If the area of the lot or parcel outside the High HCA is greater than the total disturbance area, then development shall not occur within the High HCA:
(Area outside High HCA > TDA = no development in High HCA);
 - (b) The amount of development that may occur within the Moderate HCA is equal to the total disturbance area minus the area of the lot or parcel outside of the High and Moderate HCA ($TDA - (\text{Low HCA} + \text{non-HCA}) = MDA$). If the area of the lot or parcel outside the Moderate HCA is greater than the total disturbance area, then development shall not occur within the Moderate HCA:

(Area outside Moderate HCA > TDA = no development in Moderate HCA);

And,

- (c) The amount of development that may occur within the Low HCA is equal to the total disturbance area minus the area of the lot or parcel outside of the High, Moderate and Low HCA (TDA – non-HCA = MDA). If the area of the lot or parcel outside the Low HCA is greater than the total disturbance area, then development shall not occur within the Low HCA:

(Area outside Low HCA > TDA = no development in Low HCA).

- b. All other uses. The maximum disturbance area (MDA) allowed by right within Low, Moderate and High HCAs in these zones is found in Table 19.322.11.C-2, below; this MDA is subject to the mitigation requirements described in Section **XXX**.

Table 19.322.11.C-1
HCA Total Disturbance Area Limitations for Detached SFR Uses

HCA type	Total Disturbance Area
High	50 percent of the lot area, up to maximum of 5,000 sq. ft.
Moderate/Low	65 percent of the lot area, up to maximum of 6,000 sq. ft.

Table 19.322.11.C-2
HCA Disturbance Area Limitations for all Uses other than Detached SFR

HCA type	Maximum Disturbance Area
High	10 percent of HCA on site
Moderate	15 percent of HCA on site
Low	50 percent of HCA on site

- c. Development within an HCA in accordance with these provisions shall not result in a change of the HCA status of such developed areas on a property. In the case of a later development request seeking to develop within previously undisturbed HCAs on a property where a prior development request was subject to these provisions, the calculation of the MDA allowed on the property shall be based on the location of the HCA, notwithstanding the location of any authorized development within the HCA.
2. Protection of habitat during site development. During development of any site containing a HCA, the following standards apply:
- a. Work areas shall be marked to reduce potential damage to the HCA.
 - b. Trees in HCAs shall not be used as anchors for stabilizing construction equipment.
 - c. Native soils disturbed during development shall be conserved on the property.
 - d. An erosion and sediment control plan is required and shall be prepared in compliance with requirements set forth in the City's Engineering Design Standards Manual;
 - e. Prior to construction, the HCA that is to remain undeveloped shall be flagged, fenced, or otherwise marked and shall remain undisturbed.

- f. All work on the property shall conform to the Construction Management Plan described in Section 19.322.9(A).
- 3. Mitigation requirements for disturbance in HCAs. In order to achieve the goal of reestablishing forested canopy that meets the ecological values and functions described in Section 19.322.1, tree replacement and vegetation planting are required when development intrudes into a HCA according to the following standards, except for wetlands mitigation requirements imposed by state and federal law.
 - a. Required plants and plant densities. All trees, shrubs and ground cover must be native plants as identified by the City. An applicant must meet Mitigation Option 1 or 2, whichever results in more tree plantings; except that where the disturbance area is one acre or more, the applicant shall comply with Mitigation Option 2:
 - (1) Mitigation Option 1. This mitigation requirement is calculated based on the number and size of trees that are removed from the site. Trees that are removed from the site shall be replaced as shown in Table 19.322.11.C-3. Conifers shall be replaced with conifers. Bare ground shall be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

Table 19.322.11.C-3
Tree Replacement

Size of tree to be removed (inches in diameter)	Number of trees and shrubs to be planted
6 to 12	2 trees and 3 shrubs
13 to 18	3 trees and 6 shrubs
19 to 24	5 trees and 12 shrubs
25 to 30	7 trees and 18 shrubs
over 30	10 trees and 30 shrubs

- (2) Mitigation Option 2. This mitigation requirement is calculated based on the size of the disturbance area within a HCA. Native trees and shrubs are required to be planted at a rate of five (5) trees and twenty-five (25) shrubs per every 500 square feet of disturbance area (calculated by dividing the number of square feet of disturbance area by 500, and then multiplying that result times five trees and 25 shrubs, and rounding all fractions to the nearest whole number of trees and shrubs; for example, if there will be 330 square feet of disturbance area, then 330 divided by 500 equals .66, and .66 times five equals 3.3, so three trees must be planted, and .66 times 25 equals 16.5, so 17 shrubs must be planted). Bare ground shall be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.
- b. Plant size. Replacement trees must be at least one-half inch in caliper, measured at six inches above the ground level for field grown trees or above the soil line for container grown trees (the one-half inch minimum size may be an average caliper measure, recognizing that trees are not uniformly round), unless they are oak or madrone which may be one gallon size. Shrubs must be in at least a one-gallon container or the equivalent in ball and burlap and must be at least 12 inches in height.

- c. Plant spacing. Trees shall be planted between eight and 12 feet on-center and shrubs shall be planted between four and five feet on center, or clustered in single species groups of no more than four plants, with each cluster planted between eight and 10 feet on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.
 - d. Plant diversity. Shrubs must consist of at least two different species. If 10 trees or more are planted, then no more than 50 percent of the trees may be of the same genus.
 - e. Location of mitigation area. All vegetation must be planted on the applicant's site within the HCA or in an area contiguous to the HCA; provided, however, that if the vegetation is planted outside of the HCA then the applicant shall preserve the contiguous area by executing a deed restriction, such as a restrictive covenant.
 - f. Invasive vegetation. Invasive non-native or noxious vegetation must be removed within the mitigation area prior to planting.
 - g. Tree and shrub survival. A minimum of 80 percent of the trees and shrubs planted shall remain alive on the fifth anniversary of the date that the mitigation planting is completed.
 - h. Monitoring and reporting. Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind. The developer shall submit a two-year maintenance bond covering the continued health and survival of all plantings.
 - i. To enhance survival of the mitigation plantings, the following practices are required:
 - (1) Mulching. Mulch new plantings a minimum of three inches in depth and 18 inches in diameter to retain moisture and discourage weed growth.
 - (2) Irrigation. Water new plantings one-inch per week between June 15th to October 15th, for the three years following planting.
 - (3) Weed control. Remove, or control, non-native or noxious vegetation throughout maintenance period.
 - j. To enhance survival of tree replacement and vegetation plantings, the following practices are recommended:
 - (1) Planting season. Plant bare root trees between December 1st and February 28th, and potted plants between October 15th and April 30th.
 - (2) Wildlife protection. Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and resulting damage to plants.
4. Standards for Partitions and Subdivisions. The purpose of this section is to allow for partitions in a manner that limits the total amount of allowable development within HCAs on the partitioned parcels; and to require that new subdivision plats delineate and show the Moderate and High HCAs as a separate unbuildable tract. These standards apply in addition to the other land division requirements of the City of Milwaukee Zoning Code.
- a. Standards for Partitions containing HCAs:
 - (1) When partitioning a property into parcels, an applicant shall verify the boundaries of the HCA on the property according to Section 19.322.13(D).

- (2) Applicants who are partitioning, but are not simultaneously developing their property, do not need to comply with Section 19.322.13(D).
 - (3) When partitioning a property into parcels there shall be no more than a 30 percentage point difference in the percentage of HCA on the parcels; for example, a partition that produces two parcels, one that is 55 percent HCA and the other that is 35 percent HCA is permissible; whereas a partition that produces two parcels, one that is 75 percent HCA and the other that is 30 percent HCA is not permissible. However, an applicant may partition a property such that at least 90 percent of the original property's High HCA and 80 percent of its moderate HCA is on a separate unbuildable parcel, protected by a conservation easement.
 - (4) Subsequent development on any parcels containing HCAs shall comply with Section XXX, and the development standards of either Section XXX or Section XXX.
- b. Standards for Subdivisions containing HCAs:
- (1) Applicants who are subdividing, but not constructing structures, must verify the location of the HCA boundary according to Section 19.322.13(D), and comply with this subsection; such applicants do not need to comply with Section 19.322.13(D). Applicants who are subdividing, but not constructing structures may:
 - (a) Complete the mitigation requirements of Section XXX (and, if appropriate, Sections XXX and XXX) and thereby exempt all subsequent development on lots containing HCA from further review; or
 - (b) Not complete the mitigation requirements of Sections XXX; XXX; or, XXX thus requiring that any subsequent development within an HCA be subject to this Chapter.
 - (2) Applicants who are subdividing and developing properties must comply with Sections XXX; XXX, and XXX or XXX.
 - (3) When a property containing any HCA is subdivided, this ordinance requires that new subdivision plats delineate and show the Moderate and High HCA as a separate unbuildable tract according to the following process:
 - (a) The applicant must place at least 90 percent of the High HCA and 80 percent of the Moderate HCA in a separate tract.
 - (i) If over 50 percent of the HCA on a property is of a High designation, the entire calculation is for High (i.e., 90 percent of the HCA must be placed within a separate tract).
 - (ii) If over 50 percent of the HCA on a property is of a Moderate designation, the entire calculation is for Moderate (i.e., 80 percent of the HCA must be placed within a separate tract).
 - (b) If the tract is adjacent to the backyard for residences, the minimum backyard requirement is reduced to 10 ft.
 - (c) Prior to preliminary plat approval, the Moderate and/or High HCA shall be shown as a separate tract, which shall not be a part of any lot used for construction of a dwelling unit.

- (d) Prior to final plat approval, ownership of the HCA tract shall be identified to distinguish it from lots intended for sale. The tract may be identified as any one of the following:
 - (i) Private natural area held by the owner or homeowners association by a restrictive covenant and/or conservation easement; or
 - (ii) For residential subdivisions, private natural area subject to an easement conveying storm and surface water management rights to the City of Milwaukie and/or Clackamas County Water Environment Services and preventing the owner of the tract from activities and uses inconsistent with the purpose of this Chapter; or
 - (iii) Public natural area where the tract has been dedicated to the City of Milwaukie or a private non-profit with the mission of land conservation.

D. Discretionary Development Standards. There are three discretionary review processes provided in this section: subsection 1 provides discretionary review for an applicant seeking only to partition a property with an HCA; subsection 2 provides discretionary review for an applicant who will comply with the development standards in Section 19.322.11(C), except that the applicant seeks to meet the mitigation requirements of that section by proportionally varying the number and size of plants required to be planted; and subsection 3 provides general discretionary review standards for activities within a water quality resource area or HCA. Within HCAs, applicants may choose to use the discretionary development standards provided in this section rather than the special use or non-discretionary development standards in 19.322.11(B) and (C). For activities within water quality resource areas that are subject to Type II and minor quasi-judicial review, other than the special uses described in 19.322.11(B), applicants shall comply with the standards of subsection 3.

- 1. Discretionary Review for Partitions with an HCA. Applicants seeking to partition land in ways that do not accord with the standards established in 19.322.11(C) may seek review under this section if the all of the following standards are met.
 - a. The property does not include any water quality resource areas.
 - b. It is not practicable to comply with the partition standards in Section 19.322.11(C), and that the applicant's partition plan will result in the smallest practicable percentage point difference in the percentage of HCA on the parcels created by the partition.
 - c. Subsequent development on any parcels created by the partition and containing HCAs shall comply with all provisions of this ordinance.
- 2. Discretionary Review to Approve Mitigation that Varies the Number and Size of Trees and Shrubs within an HCA. An applicant seeking discretionary approval only to proportionally vary the number and size of trees and shrubs required to be planted under 19.322.11(C), for example, to plant fewer larger trees and shrubs or to plant more smaller trees and shrubs, but who will comply with all other provisions of Section 19.322.11(C), may seek review under this section if the all of the following standards are met.
 - a. The applicant has provided all of the following information:
 - (1) A calculation of the number of trees and shrubs the applicant would be required to plant under Section 19.322.11(C).

- (2) The numbers and sizes of trees and shrubs that the applicant proposes to plant.
 - (3) An explanation of why the numbers and sizes of trees and shrubs that the applicant proposes to plant will achieve, at the end of the fifth year after initial planting, comparable or better mitigation results as the results that would be achieved if the applicant complied with all of the requirements of Section 19.322.11(C). Such explanation shall be prepared and signed by a knowledgeable and qualified natural resources professional or a certified landscape architect and shall include discussion of site preparation including soil additives and removal of invasive and noxious vegetation, plant diversity, plant spacing, planting season, and immediate post-planting care including mulching, irrigation, wildlife protection, and weed control.
 - (4) A mitigation site monitoring and reporting plan.
- b. The proposed planting will achieve, at the end of the fifth year after initial planting, comparable or better mitigation results as the results that would be achieved if the applicant complied with all of the requirements of Section 19.322.11(C).
 - c. The proposed mitigation addressed the plant diversity, plant survival and monitoring practices in 19.322.11(C).
3. General Discretionary Review. This section provides a discretionary process by which the City analyzes the impacts of development on water quality resource areas and HCAs, as well as measures to prevent negative impacts, and also provides mitigation and enhancement requirements. The planning administrator may consult with a professional with appropriate expertise to evaluate an applicant's application prepared under this section or may rely on appropriate staff expertise, in order to properly evaluate the report's conclusions.
- a. Impact Evaluation and Alternatives Analysis. An impact evaluation and alternatives analysis is required to determine compliance with the approval criteria and to evaluate development alternatives for a particular property. The alternatives must be evaluated on the basis of their impact on Water Quality Resources and HCAs, the ecological functions provided by the resource on the property, and off-site impacts within the subwatershed (6th Field Hydrologic Unit Code) where the property is located. The evaluation and analysis shall include the following:
 - (1) Identification of the ecological functions of riparian habitat found on the property as described in Table 19.322.9(E).
 - (2) An assessment of the water quality impacts related to the development, including: sediments, temperature and nutrients, sediment control, temperature control or addressing any other condition with the potential to cause the Protected Water Feature to be listed on DEQ's 303(d) list.
 - (3) An Alternatives analysis demonstrating that:
 - (a) No practicable alternatives to the requested development exist that will not disturb the water quality resource area or HCA; and
 - (b) Development in the water quality resource area and/or HCA has been limited to the area necessary to allow for the proposed use; and

- (c) The water quality resource area can be restored to an equal or better condition in accordance with Table 19.322.11.D; and
 - (d) Road crossings will be minimized as much as possible.
 - (e) An explanation of the rationale behind choosing the alternative selected, including how adverse impacts to resource areas will be avoided and/or minimized.
- (4) For applications seeking an alteration, addition, rehabilitation or replacement of existing structures located within the water quality resource area:
- (a) Demonstrate that no reasonably practicable alternative design or method of development exists that would have a lesser impact on the water quality resource area than the one proposed; and
 - (b) If no such reasonably practicable alternative design or method of development exists, the project should be conditioned to limit its disturbance and impact on the water quality resource to the minimum extent necessary to achieve the proposed addition, alteration, restoration, replacement or rehabilitation; and
 - (c) Provide mitigation to ensure that impacts to the functions and values of the water quality resource area will be mitigated or restored to the extent practicable.
- (5) A water quality resource area mitigation plan that contains the following information:
- (a) A description of adverse impacts that will be caused as a result of development.
 - (b) An explanation of how adverse impacts to resource areas will be avoided, minimized, and/or mitigated in accordance with, but not limited to, Table 19.322.11.D.
 - (c) A description of how the following standards will be achieved:
 - i. Where existing vegetation has been removed, the site shall be revegetated as soon as practicable.
 - ii. Where practicable, the types, sizes and intensities of lights must be placed so that they do not shine directly into the natural resource locations.
 - iii. Areas of standing trees, shrubs, and natural vegetation will remain connected or contiguous, particularly along natural drainage courses, except where mitigation is approved, so as to provide a transition between the proposed development and the natural resource, provide opportunity for food, water and cover for animals located within the water quality resource.
 - (d) A list of all responsible parties including, but not limited to, the owner, applicant, contractor or other persons responsible for work on the development site.
 - (e) A map showing where the specific mitigation activities will occur. Offsite mitigation shall not be used to meet mitigation requirements of this chapter.

- (f) An implementation schedule, including timeline for construction, mitigation, mitigation maintenance, monitoring, reporting and a contingency plan. All in-stream work in fish-bearing streams shall be done in accordance with the Oregon Department of Fish and Wildlife in-stream timing schedule.

Table 19.322.11.D Water Quality Resource Area Requirements	
Existing Condition of Water Quality Resource Area	Requirements Applicable to Portions of the Water Quality Resource Area Disturbed During Development or Land Disturbance
Good Existing Corridor	
Combination of trees, shrubs and groundcover are 80% present, and there is more than 50% tree canopy coverage in the vegetated corridor.	<ul style="list-style-type: none"> • Submit an inventory of vegetation in areas proposed to be disturbed and a plan for mitigating water quality impacts related to the development, including: sediments, temperature and nutrients; sediment control; temperature control • or addressing any other condition that may have caused the Protected Water Feature to be listed on DEQ’s 303 (d) list. • Inventory and remove debris and noxious materials.
Marginal Existing Vegetated Corridor	
Combination of trees, shrubs and groundcover are 80% present, and 25—50 percent canopy coverage in the vegetated corridor.	<ul style="list-style-type: none"> • Vegetated disturbed and bare areas with non-nuisance plantings from Native Plants List. • Inventory and remove debris and noxious materials. • Revegetate with native species using a city approved plan developed to represent the vegetative composition that would naturally occur on the site. • Revegetation must occur during the next planting season following site disturbance. Annual replacement of plants that do not survive is required until vegetation representative of natural conditions is established on the site. • Restore and mitigate according to approved plan using non-nuisance plantings from Native Plants List. • Inventory and remove debris and noxious materials.
Degraded Existing Vegetated Corridor	
Less vegetation and canopy coverage than Marginal Vegetated Corridors, and/or greater than 10% surface coverage of any non-native species.	<ul style="list-style-type: none"> • Vegetate disturbed and bare areas with appropriate plants from Native Plants List. • Remove non-native species and revegetate with non-nuisance plantings from Native Plants List. • Plant and seed to provide 100 percent surface coverage. • Restore and mitigate according to approved plan using non-nuisance plantings from Native Plants List. • Inventory and remove debris and noxious materials.

19.322.12 Variances

- A. The purpose of this section is to ensure that compliance with this ordinance does not cause unreasonable hardship. To avoid such instances, the requirements of this ordinance may be varied. Variances are also allowed when strict application of this ordinance would unreasonably deprive an owner of economically viable use of land.

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- B. This section applies in addition to the standards governing proposals to vary the requirements of the base zone.
- C. A variance to avoid the unreasonable loss of economically viable use of a lot that contains water quality resource areas and/or HCAs is permitted. Applicants must demonstrate that without the proposed variance, the reasonable economic use of the property would be denied. The applicant must show that no other development proposal could result in permission for an economically viable use of the property.
- D. Variance Conditions.

The planning commission may impose such conditions as are deemed necessary to minimize adverse impacts that may result from granting relief from provisions of this chapter. If a variance is granted to allow an encroachment into a water quality resource area, it shall be subject to the following conditions:

1. The minimum width of the vegetated corridor shall be twenty-five (25) feet on each side of a primary protected water feature.
2. No more than twenty-five percent (25%) of the length of the water quality resource area for a primary protected water feature within a development site can be less than twenty-five (25) feet in width on each side of the water feature.
3. For lots or parcels which are fully or predominantly within the water quality resource area and are demonstrated to be unbuildable by the vegetative corridor regulations, cities and counties shall reduce or remove vegetative corridor regulations to assure the lot or parcel will be buildable while still providing the maximum vegetated corridor practicable.

19.322.13 Map Administration

- A. Water quality resource areas – boundary verification.

In order to verify the boundary of a water quality resource area, the applicant shall provide a topographic map of the site at contour intervals of five (5) feet or less showing a delineation of the water quality resource area, which includes areas shown on the WQNR map, and that meets the definition of water quality resource areas in Table 19.322.13.A.

Table 19.322.13.A Vegetated Corridor Measurement by Protected Water Feature Type			
Protected Water Feature Type (see definitions)	Slope Adjacent to Protected Water Feature	Starting Point for Measurements from Water Feature	Width of Vegetated Corridor²
Primary Protected Water Features ¹	< 25%	<ul style="list-style-type: none"> • Edge of bank full flow or 2-year storm level; • Delineated edge of Title 3 wetland 	50 feet
Primary Protected Water Features ¹	> 25% for 150 feet or more ³	<ul style="list-style-type: none"> • Edge of bankful flow or 2-year storm level; • Delineated edge of Title 3 wetland 	200 feet

Primary Protected Water Features ¹	> 25% for less than 150 feet ³	<ul style="list-style-type: none"> • Edge of bankful flow or 2-year storm level; • Delineated edge of Title 3 wetland 	Distance from starting point of measurement to top of ravine (break in > 25% slope) ⁴ , plus 50 feet. ⁵
Secondary Protected Water Features ⁶	< 25%	<ul style="list-style-type: none"> • Edge of bankful flow or 2-year storm level; • Delineated edge of Title 3 wetland 	15 feet
Secondary Protected Water Features ⁶	> 25% ³	<ul style="list-style-type: none"> • Edge of bankful flow or 2-year storm level; • Delineated edge of Title 3 wetland 	50 feet

¹ Primary Protected Water Features include: all perennial streams and streams draining greater than 100 acres, Title 3 wetlands, natural lakes and springs.

² Vegetated corridor width shall be applied to the outer boundaries of water features, such as the edge of a wetland and both banks of a watercourse.

³ Vegetated corridors in excess of 50-feet for primary protected features, or in excess of 15-feet for secondary protected features, apply on steep slopes only in the uphill direction from the protected water feature.

⁴ Where the Protected Water Feature is confined by a ravine or gully, the top of ravine is the break in the > 25% slope (see slope measurement in Appendix).

⁵ A maximum reduction of 25 feet may be permitted in the width of the vegetated corridor beyond the slope break if a geotechnical report demonstrates that slope is stable. To establish the width of the vegetated corridor, slope should be measured in 25-foot increments away from the water feature until slope is less than 25% (top of ravine).

⁶ Secondary Protected Water Features include intermittent streams draining 50—100 acres.

B. Water Quality Resource Areas - Map Corrections, Deletions.

1. Improperly mapped water features shown on the WQNR Map may be deleted by administrative review in accordance with 19.1011.2 subject to the following criteria:
 - a. In the case of wetlands, submission of a wetland delineation prepared by a professional wetland scientist in accordance with the 1996 Oregon Freshwater Wetland Assessment Methodology demonstrating that the site does not contain wetlands.
 - b. In the case of drainages, submission of a hydrology report prepared by a professional engineer demonstrating that the drainage does not meet the definition of a protected resource.
2. The planning director shall confer with the department of state lands and metro to confirm delineation and hydrology reports as may be needed prior to issuing a notice of decision on a requested map deletion.
3. The city shall amend the WQNR Map if the wetland or hydrology report demonstrates:
 - a. That a primary protected water feature no longer exists because the area has been legally filled, culverted or developed prior to the adoption of this chapter; or
 - b. The boundaries of the water quality resource area have changed since adoption of the WQNR Map; or
 - c. An error in the original mapping has been demonstrated.

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- C. Water Quality Resource Areas - Map Correction, Additions and Modifications. Map corrections that require the addition of a protected water feature to the WQNR map shall be made in accordance with 19.900 Amendments.
- D. HCA – Boundary verification and correction. The boundary verification approaches described below are available for applicants who believe either: (1) that the WQNR map is accurate, (2) that there is a simple incongruity between the WQNR map and the boundary lot lines of a property, (3) that the property was developed prior to January 5, 2009; or (4) that the WQNR map is inaccurate for a reason other than as described in subsections 2 and 3.
1. Applicant Believes WQNR Map is Accurate. An applicant who believes that the WQNR map is accurate shall submit the following information regarding the real property lot or parcel:
 - a. A detailed property description;
 - b. A copy of the applicable WQNR map;
 - c. A summer 2005 aerial photograph of the property, with lot lines shown, at a scale of at least one map inch equal to 50 feet for lots of 20,000 or fewer square feet, and a scale of one map inch equal to 100 feet for larger lots. Said information is available from the Metro Data Resource Center;
 - d. The information required to be submitted under Section XXX or XXX if the applicant proposes development within any HCA under those provisions; and
 - e. Any other factual information that the applicant wishes to provide to support map verification.
 2. Obvious Misalignment Between Mapped Habitat and Property Lot Lines. In some cases, the mapped vegetative cover data might not align precisely with the tax lot layer that shows property lines, resulting in a WQNR map that is also misaligned with tax lot lines. An applicant who believes that the WQNR map is inaccurate based on such an obvious misalignment shall submit the following information regarding the real property lot or parcel:
 - a. The information described in subsection 1, above; and,
 - b. A documented demonstration of the misalignment between the WQNR map and the property's tax lot boundary lines. For example, an applicant could compare the boundary lot lines shown for roads within 500 feet of a property with the location of such roads as viewed on the aerial photograph of the area surrounding a property to provide evidence of the scale and amount of incongruity between the WQNR map and the property lot lines, and the amount of adjustment that would be appropriate to accurately depict habitat on the property.
 3. Property Developed Between Summer 2002 and September 29, 2005. Where a property was developed between the summer of 2002 (when the aerial photo used to determine the regional habitat inventory was taken) and September 29, 2005, the applicant shall submit the following information regarding the real property lot or parcel:
 - a. The information described in subsection 1, above;
 - b. A summer 2002 aerial photograph of the property, with lot lines shown, at a scale of at least one map inch equal to 50 feet for lots of 20,000 or fewer square feet, and a scale of one map inch equal to 100 feet for larger lots, said information is available from the Metro Data Resource Center;

- c. Any approved building permits or other development plans and drawings related to the development of the property that took place between summer 2002 and September 29, 2005; and
 - d. A clear explanation and documentation, such as supporting maps or drawings or an more recent aerial photograph, indicating the new development that has occurred and where previously identified habitat no longer exists because it is now part of a developed area.
4. WQNR map is inaccurate for other reasons. The applicant shall submit a report prepared and signed by either (1) a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist, or (2) a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, storm water facilities, or other similar facilities. Such report shall include:
- a. A description of the qualifications and experience of all persons that contributed to the report, and, for each person that contributed, a description of the elements of the analysis to which the person contributed;
 - b. The information described in subsection 1, above;
 - c. The information described in subsections 2(b) and/or 3(b) through 3(d), if the applicant believes such information is relevant to the verification of habitat location on the subject lot or parcel;
 - d. Additional aerial photographs if the applicant believes they provide better information regarding the property, including documentation of the date and process used to take the photos and an expert's interpretation of the additional information they provide;
 - e. A map showing the topography of the property shown by two-foot vertical contours in areas of slopes less than 15 percent, and at five-foot vertical contours of slopes 15 percent or greater.; and
 - f. Any additional information necessary to address each of the verification criteria in subsection 5, below, a description of where any HCAs are located on the property based on the application of the verification criteria, and factual documentation to support the analysis.
5. Verification Criteria. The verification of the location of HCAs shall be according to the three-step process described below. A verification application shall not be considered complete and shall not be granted unless all the information required to be submitted with the verification application has been received.
- a. Step 1. Verifying boundaries of inventoried riparian habitat. Locating habitat and determining its riparian habitat class is a four-step process:
 - (1) Locate the water feature that is the basis for identifying riparian habitat.
 - (a) Locate the top of bank of all streams, rivers, and open water within 200 feet of the property.
 - (b) Locate all flood areas within 100 feet of the property.
 - (c) Locate all wetlands within 150 feet of the property based on the **City's Local Wetland Inventory**. Identified wetlands shall be further delineated consistent with methods currently accepted by the Oregon Department of State Lands (ODSL) and the U.S. Army Corps of Engineers (Corps).

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- (2) Identify the vegetative cover status of all areas on the property that are within 200 feet of the top of bank of streams, rivers, and open water, are wetlands or are within 150 feet of wetlands, and are flood areas and within 100 feet of flood areas.
 - (a) Vegetative cover status shall be as identified on the Metro Vegetative Cover Map, available from the Metro Data Resource Center.
 - (b) The vegetative cover status of a property may be adjusted only if: (1) the property was developed prior to the time the regional program was approved (see Section XXX, above), or (2) an error was made at the time the vegetative cover status was determined. To assert the latter type of error, applicants shall submit an analysis of the vegetative cover on their property using summer 2002 aerial photographs and the definitions of the different vegetative cover types provided in Chapter XXX (Definitions).
- (3). Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 feet of the property is greater than or less than 25 percent using the methodology as described in Chapter XXX; and
- (4). Identify the riparian habitat classes applicable to all areas on the property using Table 19.322.13.D-1 and the data identified in Section XXX through XXX.

**Table 19.322.13.D-1
Method for Locating Boundaries of Class I and II Riparian Areas**

Distance from Water Feature	Development/Vegetation Status ¹			
	Developed areas not providing vegetative cover	Low structure vegetation or open soils	Woody vegetation (shrub and scattered forest canopy)	Forest Canopy (closed to open forest canopy)
(a) Surface Streams				
0-50'	Class II	Class I ²	Class I	Class I
50'-100'		Class II ³	Class I	Class I
100'-150'		Class II ³ if slope>25%	Class II ³ if slope>25%	Class II ³
150'-200'		Class II ³ if slope>25%	Class II ³ if slope>25%	Class II ³ if slope>25%
(b) Wetlands (Wetland feature itself is a Class I Riparian Area)				
0-100'		Class II ³	Class I	Class I
100'-150'				Class II ²
(c) Flood Areas				
Within 300' of river or surface stream		Class I	Class I	Class I
More than 300' from river or surface stream	Footnote 4	Class II ³	Class II ³	Class I

0-100' from edge of flood area			Class II ^{3,5}	Class II ³
<p>¹ The vegetative cover type assigned to any particular area was based on two factors: the type of vegetation observed in aerial photographs and the size of the overall contiguous area of vegetative cover to which a particular piece of vegetation belonged. As an example of how the categories were assigned, in order to qualify as "forest canopy" the forested area had to be part of a larger patch of forest of at least one acre in size.</p> <p>² Except that areas within 50 feet of surface streams shall be Class II riparian areas if their vegetation status is "Low structure vegetation or open soils," and if they are high gradient streams. High gradient streams are identified on the Metro Vegetative Cover Map. If a property owner believes the gradient of a stream was incorrectly identified, then the property owner may demonstrate the correct classification by identifying the channel type using the methodology described in the Oregon Watershed Assessment Manual, published by the Oregon Watershed Enhancement Board, and appended to the Metro's Riparian Corridor and Wildlife Habitat Inventories Report, Attachment 1 to Exhibit F to Metro Ordinance No. 05-1077C.</p> <p>³ Areas that have been identified as habitats of concern, as designated on the Metro Habitats of Concern Map (on file in the Metro Council office), shall be treated as Class I riparian habitat areas in all cases, subject to the provision of additional information that establishes that they do not meet the criteria used to identify habitats of concern as described in Metro's Technical Report for Fish and Wildlife. Examples of habitats of concern include: Oregon white oak woodlands, bottomland hardwood forests, wetlands, native grasslands, riverine islands or deltas, and important wildlife migration corridors.</p> <p>⁴ If development prior to the effective date of Metro Ordinance No. 05-1077C within a contiguous, undeveloped flood area (to include contiguous flood areas on adjacent properties) that was not mapped as having any vegetative cover has reduced the size of that contiguous flood area to less than one half of an acre in size, then the remaining flood area shall also be considered a developed flood area and shall not be identified as habitat.</p> <p>⁵ Only if within 300 feet of a river or surface stream.</p>				

- b. Step 2. Urban Development Value of the Property. The urban development value of property designated as regionally significant habitat is depicted on the Metro Habitat Urban Development Value Map (available from the Metro Data Resource Center).
 - (1) A property's urban development value designation shall be adjusted upward if the Metro 2040 Design Type designation for the property lot or parcel has changed from a category designated as a lower urban development value category to one designated as a higher urban development value category. 2040 Design Type designations are identified on the Metro 2040 Applied Concept Map (available from the Metro Data Resource Center).
 - (2) Properties in areas designated on the 2040 Applied Concept Map as the Central City, Regional Centers, Town Centers, and Regionally Significant Industrial Areas are considered to be of high urban development value; properties in areas designated as Main Streets, Station Communities, Other Industrial Areas, and Employment Centers are of medium urban development value; and properties in areas designated as Inner and Outer Neighborhoods and Corridors are of low urban development value.
 - (3) As designated in Title 13 of Metro's Urban Growth Management Functional Plan, properties owned by a regionally significant educational or medical facility are designated as high urban development value.

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- c. Step 3. Cross-Reference Habitat Class With Urban Development Value. City verification of the locations of High, Moderate, and Low Habitat Conservation Areas shall be consistent with Table 19.322.13.D-2.

**Table 19.322.13.D-2
Method for Identifying Habitat Conservation Areas (“HCA”)**

<i>Fish & wildlife habitat classification</i>	<i>High Urban development value¹</i>	<i>Medium Urban development value²</i>	<i>Low Urban development value³</i>	<i>Other areas: Parks and Open Spaces, no design types outside UGB</i>
Class I Riparian	Moderate HCA	High HCA	High HCA	High HCA / High HCA+ ⁴
Class II Riparian	Low HCA	Low HCA	Moderate HCA	Moderate HCA / High HCA+ ⁴
Class A Upland Wildlife	No HCA	No HCA	No HCA	No HCA / High HCA ⁵ / High HCA+ ⁴
Class B Upland Wildlife	No HCA	No HCA	No HCA	No HCA / High HCA ⁵ / High HCA+ ⁴

NOTE: The default urban development value of property is as depicted on the Metro Habitat Urban Development Value Map. The Metro 2040 Design Type designations provided in the following footnotes are only for use when a city or county is determining whether to make an HCA adjustment.

¹Primary 2040 design type: Regional Centers, Central City, Town Centers, and Regionally Significant Industrial Areas

²Secondary 2040 design type: Main Streets, Station Communities, Other Industrial areas, and Employment Centers

³Tertiary 2040 design type: Inner and outer neighborhoods, Corridors

⁴Cities and counties shall give Class I and II riparian habitat and Class A and B upland wildlife habitat in parks designated as natural areas even greater protection than that afforded to High Habitat Conservation Areas.

⁵All Class A and B upland wildlife habitat in publicly-owned parks and open spaces, except for parks and open spaces where the acquiring agency clearly identified that it was acquiring the property to develop it for active recreational uses, shall be considered High HCAs.

[Insert WQR Maps 1-6 here.]

CHAPTER 19.100 INTRODUCTORY PROVISIONS

19.103 Definitions

Refer to Title 18 for definitions related to flood hazard areas.

As used in this title: *[only new or changed definitions are included]*

“Bankful stage” means the stage or elevation at which water overflows the natural banks of a stream or other waters of the state and begins to inundate upland areas. In the absence of physical evidence, the two-year recurrent flood elevation may be used to approximate the bankful stage.

“Constructed wetlands” means those wetlands developed as a water quality or quantity facility, subject to change and maintenance as such. These areas must be clearly defined and/or separated from naturally occurring or created wetlands.

“Development” means all improvements on a site, including, but not limited to: buildings, accessory structures, parking and loading areas, paved or graveled areas, improved open areas (such as plazas or walkways), above-ground utilities, landscaping, and areas devoted to exterior display, storage, or activities. Development also includes actions that result in physical change to a site, including, but not limited to: mining, dredging, filling, or grading in amounts greater than 10 cubic yards. Some types of development may require issuance of a development permit and/or land use approval prior to construction or placement. Development does not include the following: (1) stream enhancement or restoration projects approved by cities and counties; (2) farming practices as defined in ORS 30.930 and farm use as defined in ORS 215.203, except that buildings associated with farm practices and farm uses are subject to the requirements of Title 3; (3) construction on lots in subdivisions meeting the criteria of ORS 92.040(2); or (4) natural geologic forms or unimproved land.

“Disturb” means to make changes to the existing physical status of the land that are made in connection with development. The following changes are excluded from the definition: enhancement or restoration of the Water Quality Resource Area and planting native cover identified in the Milwaukie Native Plant List.

“Enhancement” means the process of improving upon the natural functions and/or values of an area or feature, which has been degraded by human activity. Enhancement activities may or may not return the site to a predisturbance condition, but create/recreate processes and features that occur naturally.

“Flood management areas” means all lands contained within the 100 year floodplain, flood area and floodway as shown on the Federal Emergency Management Agency Flood Insurance Maps and the area of inundation for the February 1996 flood. In addition, all lands which have documented evidence of flooding.

“Invasive non-native or noxious vegetation” means plant species that have been introduced and due to aggressive growth patterns and lack of natural enemies in the area where introduced, spread into native plant communities.

“Native vegetation” means any vegetation native to the Portland metropolitan area or listed on the Milwaukie Native Plant List.

“Net acre” means an area measuring 43,560 square feet excluding the following: rights-of-way; floodplains; protected water features; natural resource areas protected under statewide planning

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Goal 5; slopes in excess of 25 percent; and publicly owned land designated for park, open space and resource protection.

“Ordinary mean high water line” means as the elevation on the bank or shore to which water ordinarily rises in season.

“Ordinary mean low water line” means the line on the bank or shore to which water ordinarily recedes in season; synonymous with mean low water.

“Perennial streams” means all primary and secondary perennial waterways mapped by the U.S. Geological Survey.

“Protected water feature” means the following:

“Primary protected water feature” means and includes any of the following:

- Title 3 wetlands.
- Rivers, streams, and drainages downstream from the point at which 100 acres or more are drained to that water feature (regardless of whether it carries year-round flow).
- Streams carrying year-round flow.
- Springs which feed streams and wetlands and have year-round flow.
- Natural lakes.

“Secondary protected water features” means and includes intermittent streams and seeps downstream of the point at which 50 acres are drained and upstream of the point at which 100 acres are drained to that water feature.

“Restoration” means the process of returning a disturbed or altered area or feature to a previously existing natural condition. Restoration activities reestablish the structure, function and/or diversity to that which occurred prior to impacts caused by human activity.

“Riparian” means those areas associated with streams, lakes and wetlands where vegetation communities are predominately influenced by their association with water.

“Stormwater facility” or “stormwater pre-treatment facility” means any structure or drainageway that is designed, constructed, and maintained to collect, filter, and retain or detain surface water runoff during and after a storm event for the purpose of water quality improvement. It may also include, but is not limited to, existing features such as wetlands, swales, and ponds that are maintained as stormwater facilities.

“Stream” means a body of running water moving over the earth’s surface in a channel or bed, such as a creek, rivulet or river, that flows at least part of the year, including perennial and intermittent streams.

“Title 3 Wetlands” means wetlands as shown on the water quality resource area map and other wetlands added to city or county adopted water quality resource area maps consistent with the criteria in Metro Urban Growth Management Functional Plan Title 3 Section 3.

“Vegetated corridor” means the area of setback between the top of the bank of a protected water feature and the delineated edge of the water quality resource area as defined in Table 19.322.9.A.

“Water quality and floodplain management area” means the area that identifies where the water quality resource area and floodplain management area overlay zone is applied.

“Water quality resource areas” means vegetated corridors and the adjacent water feature as established in Chapter 19.322.

“Mitigation” means the reduction of adverse effects of a proposed project by considering, in this order: (1) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (2) rectifying the impact by repairing, rehabilitating or restoring the affected environment; (3) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action by monitoring and taking appropriate measures; and/or (4) compensating for the impact by replacing or providing comparable substitute water quality resource areas.

“Significant negative impact” means an impact that affects the natural environment, considered individually or cumulatively with other impacts on the water quality resource area, to the point where existing water quality functions and values are degraded.

“Watershed” means a geographic unit defined by the flows of rainwater or snowmelt.

“Wetlands” means those areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

TITLE 16 ENVIRONMENT

CHAPTER 16.32 TREE CUTTING

[no amendments to incorporate]